

Superfund Records Center
SITE: Pine St. Canal
BREAK: 134
OTHER: _____

Pine Street Barge Canal Superfund Site
Chronology of Remedial Action
July 2006



SDMS DocID 263718

Consensus Remedy Isolate ecological receptors from hazardous materials by placing a sand/soil cap over contaminated sediments; control water levels to maintain wetland communities; manage stormwater to minimize recontamination; restrict land and groundwater use through institutional controls; and long-term monitoring.

Sept 1998 EPA issues Record of Decision adopting consensus remedy.

Oct 1998 – Nov 1999 Consent Decree for remedial design/remedial action negotiated; entered in court in Feb 2000.

Dec 1999 – Fall 2000 Conduct pre-design investigations including pilot test for installing sand cap from barge; develop remedial design workplans.

Winter 2000 – Spring 2001 Develop conceptual (30%) remedial design package.

Summer – Fall 2001 Outlet weir design finalized; weir constructed in October.

Winter 2001 – Spring 2002 Design for second phase of work finalized (stormwater management features in Area 7 and BED, capping in Areas 3 and 7).

July 2002 Construction on second phase begins.

Dec 2002 Design modified to dewater and cap canal (Areas 1 and 2) in the “dry” vs. through water, from a barge.

Jan 2003 Design modified again to dewater and cap turning basin (Area 8) in the dry.

March 2003 All capping complete; canal and turning basin re-flooded.

Summer – Fall 2003 Sheens and globules of NAPL observed on the canal water surface, and, pools of NAPL observed on the west bank in the southern portion of the canal. Historic cribbing and root systems of dead trees along the west bank are identified as preferential pathways for mobile NAPL moving in response to weight of cap.

Dec 2003 – Jan 2004 Design cap extension over cribbing and other pathways on west bank.

June – July 2004 Construct west bank cap.

Summer 2005 Observe NAPL sheens and globules on canal surface again, though in smaller quantities than previous year; believed to be associated with methane bubbles generated in the sediments under the cap.

Nov 2005 Performing Defendants submit action plan for addressing ongoing NAPL releases. Propose a focused RI/FS-type course of action to fill data gaps, identify release mechanism, and present options for add'l remediation.

Spring – Winter 2006 Perform field investigations to determine quantity and trends of NAPL releases; extend of NAPL in the subsurface; relationship to gas bubbles, etc.

Spring – Summer 2007 Evaluate field data; design add'l remedial action(s) to be taken to prevent future NAPL releases.

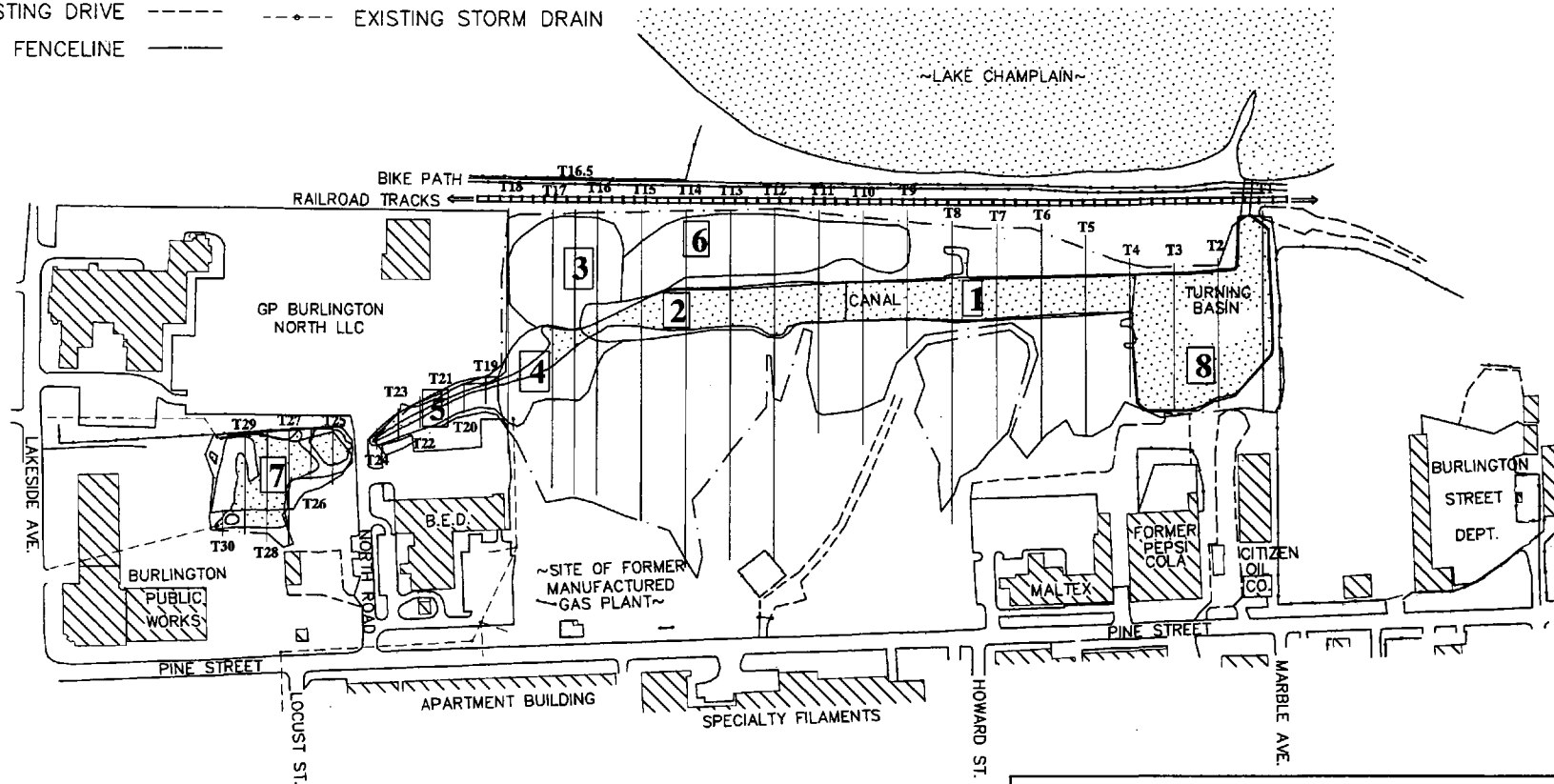
Spring – Fall 2008 Construct add'l NAPL control measures.

Ongoing Environmental controls (e.g., booms across the canal) prevent NAPL releases from migrating to Lake Champlain. Groundwater, surface water, cap, benthic and wetland monitoring continues.



LEGEND

- | | | | |
|--------------------|----------|----------------------|-----------------|
| STUDY SUBAREA | 4 | TRANSECT LOCATION | T19 |
| WETLAND BOUNDARY | --- | SURFACE WATER | [Stippled Area] |
| EXISTING DRIVE | ---- | EXISTING STORM DRAIN | - - - - - |
| EXISTING FENCELINE | ---- | | |



0 100 200 400
 SCALE IN FEET

Note: Map provided by The Johnson Company.

BURLINGTON, VERMONT
 PINE STREET CANAL SUPERFUND SITE

SITE PLAN

BBL
 BASLAND, BOUCK & LEE, INC.
 engineers & scientists

FIGURE
 1-1

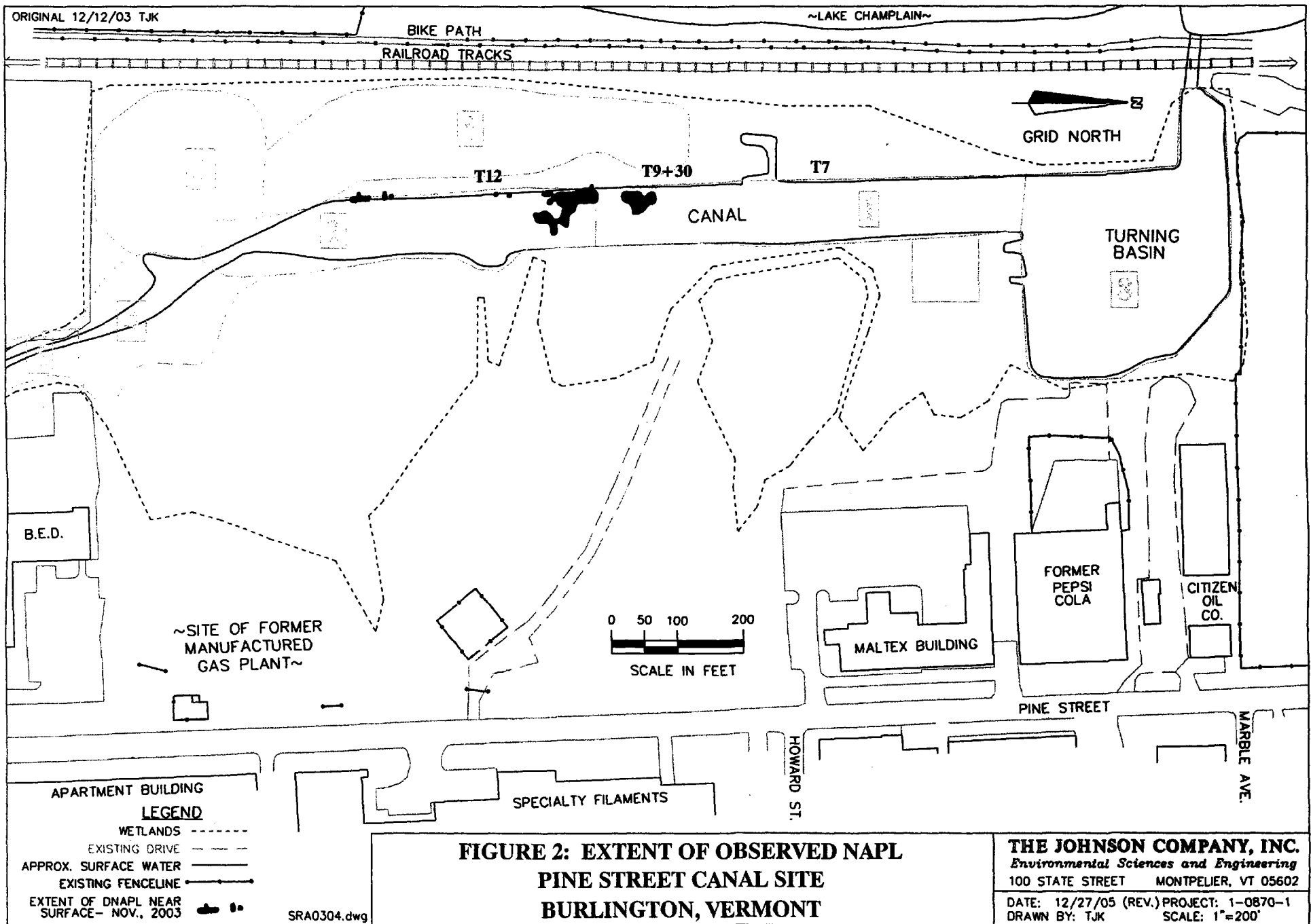




Photo 6 – Subaqueous photograph of gas bubbles exiting from Canal sand cap

Monitoring of the release locations and NAPL thicknesses in the Canal was continued through the winter of 2003/2004 until the construction of the West Bank Cap in July 2004. Monitoring in the Canal included measurements of NAPL thickness on top of the cap by use of a sorbent pad wrapped around a pole (see Photo 7). DNAPL thicknesses of more than a foot were observed in some locations on the cap. Monitoring also included subaqueous video camera photographs of areas of interest.